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(54) Title: PROCESS FOR EPOXIDATION OF PROPYLENE

(57) Abstract

Propylene is converted to propylene oxide in a highly efficient liquid phase process wherein temperature and pressure are both increased over the course of the epoxidation, which is preferably conducted in a continuous mode of operation. The catalyst used is a heterogeneous catalyst such as titanium silicalite or titania–on–silica. The oxidizing agent is an active oxygen species such as hydrogen peroxide or an organic hydroperoxide. When the desired yield of propylene oxide can no longer be maintained, the catalyst is replaced or regenerated. Regeneration by washing the catalyst with a hot solvent containing a source of ammonium or alkali metal cations is highly effective, especially where the catalyst is a titanium–containing zeolite.